

Remarks

Claims 13, 14, 19, 21 - 25, and 31 - 51 are amended herein. Claims 17, 18, and 28 - 30 are cancelled. Claims 52 and 53 are newly added herein; these claims depend from claim 13, and otherwise track the language of claims 15 and 16. No new matter is introduced by any of the amendments, and entry thereof is requested.

The specification as amended to update the related applications data.

Claims 13 - 16, 19, 21 - 27, 31 - 53 are in the application. Reconsideration of the application, as amended, is requested.

The points raised in the Office action will now be addressed, beginning with the claim objections.

Claim Objections

Claims 18, 19, 21 - 25, 29, 30 and 41 were objected to, the Examiner requiring correction of the phrase "FeXn" to -- FeXN --. It is believed no correction of claim 19 is required, inasmuch as the phrase "FeXn" does not appear in claim 19. Claims 21 - 25, 29, 30 and 41 are amended herein to correct this typographical error, and claims 18, 29 and 30 are canceled. The claims contain no further instances of "FeXn", and these objections can now be withdrawn.

Section 112 Rejections

Claims 13 - 19 and 21 - 51 were rejected under 35 U.S.C. § 112, ¶ 2, for indefiniteness, the Examiner asserting that the phrase "patterning a second pole" as recited in claim 13 rendered the claim vague and indefinite, for the reason that it was "unclear as to how the second pole is patterned without forming the second pole."

Claim 13 is amended herein to recite -- masking the thin layer of high magnetic moment material in a pattern corresponding to a second pole to be formed -- in place of "patterning a second pole". *See*, Applicants' specification, paragraph beginning "With reference still to Figure 4, the formation of the second pole will now be described. ...", running from line 29 on page 11 to line 17 on page 12. Accordingly, the Section 112 rejection for indefiniteness can be withdrawn.

Rejections under 35 U.S.C. § 103(a)

Claims were variously rejected under 35 U.S.C. § 103(a) for obviousness: claims 13, 17 and 21 - 27 over Ju *et al.* U.S. 5,843,521 (“Ju”) in view of Santini U.S. 5,901,431 (“Santini”); claims 14, 28, 31 - 35 and 40 over Ju in view of Santini and further in view of Chen *et al.* U.S. 6,430,806 (“Chen”); and claim 16 over Ju in view of Santini and Chen, and further in view of Barr *et al.* U.S. 6,198,609 (“Barr”).

To expedite prosecution of the application to allowance, the claims as amended are directed to subject matter deemed by the Examiner to be allowable (see below), and accordingly the art rejections are not addressed herein. The amendments are made without disclaimer and without prejudice to Applicants’ right to prosecute claims to additional subject matter by way of one or more Continuing applications.

Allowable Subject Matter

The Examiner indicated that claims 15, 18, 19, 29, 30, 36 - 39 and 41 - 51 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, ¶ 2, and to include all the limitations of the base claim and any intervening claims. The Examiner stated:

The prior art of record fails to disclose the claimed invention such as several different etching processes to remove second pole, a portion of the write gap layer and a material for the pedestal (as per claim 15) and the high magnetic material is formed of a lamina of FeXN of a high magnetic material and a lamina of a cobalt based ferromagnetic amorphous alloy or non-magnetic dielectric material (as per claims 18, 19, 29, 30, 36 - 39 and 41 - 51).

Claim 13 is amended herein to recite that “forming a thin layer of high magnetic moment material” includes “sputter depositing a lamina of FeXN, X being selected from the group consisting of Rh, Ta, Al, Ti and Zr, and sputter depositing a lamina of a cobalt based ferromagnetic amorphous alloy”. Accordingly, claim 13 is now allowable.

Claims 17 and 18 are canceled herein, and claims 19 and 21 - 25 are amended to depend from claim 13. Claims 14, 19, 21 - 27, 52 and 53 depend directly from claim 13 and, accordingly, these claims are now allowable.

Claims 31 - 39 are amended to recite “forming the thin layer of high magnetic moment material onto the first pole”, which finds antecedent basis in amended claim 13. Claims 31 - 51

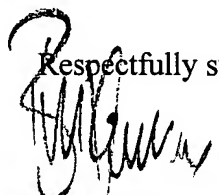
depend, directly or indirectly, from claim 14 and, inasmuch as claim 14 is now allowable, these claims are all now allowable as well.

In view of the foregoing, all the claims now in the application (claims 13 - 16, 19, 21 - 27 and 31 - 53) are believed to be in condition for allowance, and action to that effect is respectfully requested.

This Response is being filed within the third month following the three months' shortened statutory period set by the Examiner for response to the Office action and, accordingly, it is accompanied by a Petition for three months' extension of time and a fee or fee authorization therefor. In the event the Examiner may determine that additional fee[s] may be required in connection with the filing of this paper, petition is hereby made therefor, and the Commissioner is authorized to charge any additional fee (or to credit any overpayment) to Deposit Account No. 50-0869 (RDRT 1027-2).

If the Examiner determines that a conference would facilitate prosecution of this application, the Examiner is invited to telephone Applicants' representative, undersigned, at the telephone number set out below.

Respectfully submitted,

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